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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,203	04/21/2004	Flor Del Carmen Rivas	839-1489	3202
30024	7590	10/25/2005	EXAMINER	
NIXON & VANDERHYE P.C. 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EDGAR, RICHARD A	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/709,203

Applicant(s)

RIVAS ET AL.

Examiner

Richard Edgar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/21/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities:

In paragraph 0023, lines 4, the reference numeral "54" should be deleted since the annular groove in the oil slinger has previously been referenced with the numeral "56". Note the annular groove 54 is later defined in the paragraph corresponding to a surface 53.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 7-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 2,846,245 (Weaver hereinafter).

Weaver shows a turbine comprising an oil deflector including at least one set of seal rings 8; and a rotary shaft including an annular step 6a, the step having a circumferential surface 7c in proximity to the seal rings and a side surface 7b extending radially from a central portion of the shaft and defining a groove positioned radially underneath the circumferential surface 7c (see Fig. 1).

The step 6a further includes another side surface extending radially from the central portion of the shaft, the groove extending axially toward the other side surface (see Fig. 1).

In Fig. 3, the shaft further includes a thrust bearing enclosure 16 which extends radially from the central portion of the shaft 6, the step projecting axially away from the thrust bearing enclosure.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 9, 11 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 2,846,245 (Weaver hereinafter) as applied to claims 1-2, 4, 7-8 and 10 above, and further in view of United States Patent No. 3,942,804 (Andress et al. hereinafter).

Weaver, as explained above, shows an oil deflector for a bearing of a steam turbine shaft. Weaver however, does not state that the shaft is for a certain stage, or that there is more than one bearing/oil deflector assembly along the axial length of the shaft.

Andress et al. explain that in a turbomachine, a common rotor shaft has several sections or stages, wherein each section is provided with a bearing for supporting the

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shaft and an oil seal for preventing oil from leaking from the bearing (see col. 1, lines 9-27).

Since Weaver shows a turbomachine having a shaft supported by a bearing and oil deflector, and Andress et al. disclose that turbomachines have multiple sections along a coupled shaft, whereby each section of the shaft is supported by a bearing and an oil seal, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to duplicate the bearing and oil deflector teachings of Weaver along the different sections of the turbomachine, as taught by Andress et al. for the purpose of supporting each section of the shaft with a bearing and preventing oil from leaking from each bearing.

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 2,846,245 (Weaver hereinafter) as applied to claims 1 and 7 above, and further in view of United States Patent No. 4,350,345 (Kalan et al. hereinafter).

Weaver discloses an oil deflector assembly comprising a circumferential surface 7c cooperating with seal member 8 having passages 8f therein for circulating the oil.

Weaver does not disclose an oil slinger pocket on the circumferential surface.

Kalan et al. teach an oil deflector comprising a shaft 10 having an oil slinger pocket 36 therein cooperating with a collection pocket 32 for the purpose of trapping oil and imparting centrifugal force to advance the oil into the collection pocket.


Since Weaver shows to collect oil at the seal member 8, and Kalan et al. teach to use a oil slinger pocket to aid in the oil collection process, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide an oil slinger pocket, as taught by Kalan et al., in the circumferential surface of Weaver, for the purpose of trapping oil and imparting centrifugal force to advance the oil into the seal member.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Edgar whose telephone number is (571) 272-4816. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7 am- 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Richard Edgar  
Examiner  
Art Unit 3745

RE